The Malawi Priorities Project

A Cost-Benefit Note: Implementing the National Land Policy in Malawi - Technical Report

National Planning Commission Report with technical assistance from the Copenhagen Consensus Center and the African Institute for Development Policy

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This work has been produced as a part of the Malawi Priorities project.

Malawi Priorities: Background

Malawi Priorities is a research-based collaborative project implemented by the National Planning Commission (NPC) with technical assistance from the African Institute for Development Policy (AFIDEP), and the Copenhagen Consensus Center (CCC) to identify and promote the most effective interventions that address Malawi's development challenges and support the attainment of its development aspirations. The project seeks to provide the government with a systematic process to help prioritize the most effective policy solutions so as to maximize social, environmental and economic benefits on every kwacha invested. Cost-benefit analysis is the primary analytical tool adopted by the project. Cost-benefit analysis will be applied to 20-30 research questions of national importance. Research will take place over the course of 2020 and 2021.

Research questions were drawn from the NPC's existing research agenda, developed in September 2019 after extensive consultation with academics, think tanks, the private sector and government. This sub-set was then augmented, based on input from NPC, an Academic Advisory Group (AAG) of leading scholars within Malawi, and existing literature, particularly previous cost-benefit analyses conducted by the Copenhagen Consensus Center. The research agenda was validated and prioritized by a Reference Group of 25 prominent, senior stakeholders. The selection of interventions was informed by numerous consultations across the Malawian policy space, and one academic and two sector experts provide peer review on all analyses.

Cost-benefit analyses in Malawi Priorities consider the social, economic and environmental impacts that accrue to all of Malawian society. This represents a wider scope than financial cost-benefit analysis, which considers only the flow of money, or private cost-benefit analysis, which considers the perspective of only one party. All benefit-cost ratios (BCRs) reported within the Malawi Priorities project are comparable.

The cost-benefit analysis considered in the project is premised on an injection of new money available to decision makers, that can be spent on expanding existing programs (e.g. new beneficiaries, additional program features) or implementing new programs. Results should not be interpreted as reflections on past efforts or the benefits of reallocating existing funds.

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Acknowledgements

The authors would like to thank David Harris, Team Leader, Malawi -DAI Europe. All responsibility for the content of this report rests with the authors.

Contents

1. Introduction

Land reform in Malawi has been a decades long process. Starting in 1993, efforts culminated in a series of acts ushered into law in 2016 to ensure increased land security for Malawians. The laws allowed for, inter alia, formal registration of customary lands and a decentralized structure for managing land registration and transfers. Given the relatively recent enactment of these laws and creation of subsequent plans, much of the land remains untitled, and few decentralized offices have been created. This short note conducts a cost-benefit analysis of full implementation of the land reforms.

Our analysis suggests that the returns to implementing land reforms are high, with a central benefit-cost ratio (BCR) of 73, that is, for every one kwacha spent on reforms, the economic benefits are equal to 73 kwacha. This would place land reform as one of the most efficient interventions, from a cost-benefit perspective, in the entire Malawi Priorities series. There is significant variation depending on the type of land being titled, with urban land being most cost-effective to title and remote rural land being the least. Additional variance comes from varying some of the key parameters including the discount rate, the impact of land titling on land values, and the costs. The range of BCRs spans 18 to 138 – a wide range, but one that lies at the upper end of estimated BCRs from Malawi Priorities and other Copenhagen Consensus country projects.

Specifically, to adjudicate, demarcate and register land parcels on the estimated 3.2 million hectares of rural land that requires titling would cost MWK 47,680 million, based on an assumed per hectare cost of MWK 14,900. This figure is based on land titling pilots currently underway in Malawi that utilize satellite imagery to identify plot boundaries rather than traditional boundary-plot surveying and has the potential to be significantly less expensive at scale (Harris and Chilonga, 2020). For the estimated 1.5 million hectares of untitled urban and peri-urban land, the total cost of titling is estimated at MWK 17,240 million, based on a per hectare titling cost of MWK 11,175. Ongoing costs for the 35 land offices at the district and local authority level, plus 226 offices at the traditional land management level are roughly estimated at an average of MWK 2,669 million per year. Over the period 2022-2040, the total estimated costs of land reform are large - MWK 88,352 million at an 8% discount rate.

Nevertheless, the benefits of land titling are also substantial, notably increased ability to access credit, increased investment certainty, reduced costs in land transactions, reduced land conflicts and greater peace. Secure land tenure has substantial benefits for Malawians with 15 percent of households having a dispute over land and one out of five households fearing that their land would either be encroached upon or taken away from them (DAI, 2021). A review of the literature and discussions with the Department of Lands suggests a somewhat conservative boost to land values associated with titling equal to 25% (urban) and 10% (rural) of the existing land value. This boost to land proxies the private benefit associated with titling. Using land valuation data provided by the Department of Lands, we note the typical value of rural land is MWK 2,000,000 (range MWK 300,000 to 8,000,000) and peri-urban / urban land at MWK 15,000,000 (range MWK 2,500,000 to 30,000,000) per hectare. The total benefit for titling 4.7 million hectares is a staggering MWK 6,425,313 million.

The central point estimate BCR is therefore 73. In sensitivity analyses we test a range of assumptions and find that while there is significant heterogeneity in potential results, the expected value of land reform remains very high. The result provides a strong economic rationale for ensuring and accelerating the land reform agenda.

1.1 Context of Land Reform in Malawi

The goal of the Malawi National Land Policy (2002) was to ensure tenure security and equitable access to land to facilitate attainment of social harmony and social economic development. This was to be achieved through optimal and balanced use of land and land-based resources. The policy highlighted the need for empowering the community to negotiate demarcation and record land transactions, emphasizing the role of Customary Land committees (CLCs) and traditional land clerks (TLCs).

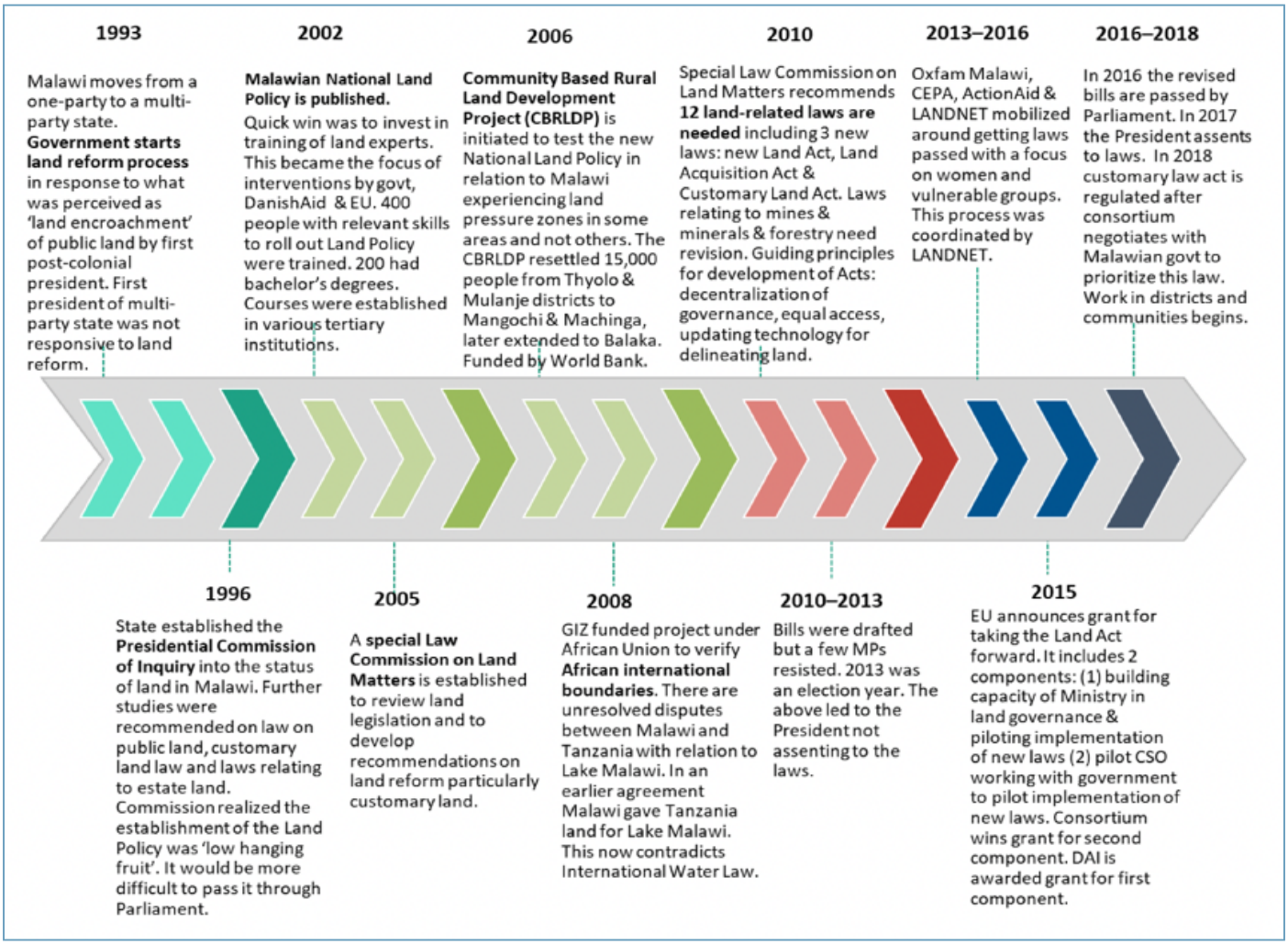
This National Land Policy, however, took considerable time to result in the legislative changes required. A snapshot of the land reform process over the last three decades in Malawi is given in Figure 1.

In July and November 2016, the Malawi National Assembly (Parliament) passed the following new or amended land related laws:

- the Land Bill
- the Physical Planning Bill
- the Land Survey Bill
- the Customary Land Bill
- the Registered Land (Amendment) Bill
- the Forest (Amendment) Bill
- the Malawi Housing Corporation (Amendment) (No.2) Bill

- the Public Roads (Amendment) Bill
- the Lands Acquisition (Amendment)Bill
- the Local Government (Amendment) Bill

Figure 1: Timeline of Land Reform Efforts in Malawi Source: Good Governance in Malawi: Impact evaluation of the 'Strengthening Land Governance Systems for Smallholder Farmers in Malawi' project. Effectiveness Review series 2019/20



The Customary Land Act introduced the system of granting, registering and titling of customary land to ensure equitable access to land and security of tenure. It allowed the creation of Customary Estates, so that smallholder farmers in Traditional Land Management Areas (TLMAs) could get legal title to their land and thus be protected from encroachment and other interests. The CLA gave land holders increased tenure security. A significant impact of this could possibly be an incentive for investments in land improvements by title holders. The process is entirely voluntary however, with it being left to the discretion of land holders to apply for Customary Estates.

The Registered Land (Amendment) Act provided for title registration throughout the country for all land categories including customary estates. All land would be subject to registration for purposes of determination of ownership. Another important tenet of the Act was the provision for decentralization of land management. Currently, land administration activities are centralized though there are representations at regional level and in some districts. This has led to capacity constraints in terms of infrastructure, human resources and finances, impacting implementation.

The new land laws advocate and envision a highly decentralized land administration system involving locally established Customary Land Committees (CLCs) at group village headman level and Land Tribunals at Traditional Authority level. Both are to be supported by district level officers. The Malawi Land Reform Implementation Plan was prepared in 2018 mainly to provide guidance on implementation of the new land-related laws. The plan aimed at piloting the new laws so as to learn and draw lessons for scaling up implementation. A few of the major outcomes aimed for included increasing economic activity on land, increased agricultural productivity, improved land service delivery, and enhanced government revenue collection. The first pilot project has been carried out by the government and its partners including Land-net, Oxfam and Centre for Environmental Policy Advocacy (CEPA) in Phalombe, Kasungu and Rumphi districts while the second pilot program is currently underway in Chikwawa district under the Shire Valley Transformation Project as well as other pilot districts under Agriculture Commercialization Project in Nkhotakota, Mchinji, Chikwawa, Nsanje, Rumphi and Karonga.

The first pilot had a significant impact on land ownership with awareness raising and sensitization playing an important role in ensuring that more than 2000 households had their land (around 4,200 parcels) adjudicated and demarcated. Community level structures including customary land committees (CLCs) and customary land tribunals (CLTs) were also established.

1.2 Benefits of Land Reform

Developing economies across the world have shown increasing interest in land reform programs. Land titling is certainly a vital step towards securing investments and providing some guarantee for ownership in the land sector (Beyers and Fay, 2015). The main fulcrum of land reforms is the reorganization of land tenure, restoration and redistribution of property rights and access to land. Social and economic development is further benefited by the creation of land markets. This formalization of land rights through titling has shown positive implications for investments in land, higher land productivity, and socioeconomic development in general (Narh et al. 2016).

Studies show that land registration leads to increased land and property investments (World Bank, 2008; Chirwa, 2008; Chilundo et al., 2006); access to credit (Lawry et al, 2014; Deininger et al., 2007; Domeher and Abdulai, 2012), improved security of tenure; increased household incomes (Deininger and Jin, 2008), gender empowerment and improved agricultural productivity (Aikaeli and Marussen, 2017; Deutsch, 2006) among other effects. While it is difficult to monetize all the effects discussed (most of which are partially but not completely mutually exclusive), one impact, which would encompass all of these, without the double counting of benefits, would be the increase in land values as a result of land titling and registration.

In a study to assess the impact of titling on property values in urban and peri-urban areas of developing countries, Durand-Lasserve and Payne (2006) found that formal land tenure does increase the market value of land, usually by at least 20 to 60 percent. Aikaeli and Markussen (2017) used household survey data to investigate the effects of formal, private property rights to agricultural land on agricultural investment, land valuation and access to credit in Tanzania. The study shows a sizeable and statistically significant effect of land ownership documents on customary land sales values. Plots held with ownership documents are on average 26.9 per cent more valuable than plots without such documents. One reason appears to be that well-documented private property rights facilitate the use of land as collateral for loans and therefore eases access to credit.

Deininger et al (2011) assessed the impacts of land registration in Ethiopia using a four-period panel which allowed use of a pipeline and difference-in-difference approach. The study found that the program increased tenure security, land-related investment, and rental market participation and yielded benefits significantly above the cost of implementation, with the propensity to rent land increasing by 9-13 percent. In an earlier study, Deininger and Chamorro (2004) used data from Nicaragua to examine the impact of award of registered and non-registered title on land values and changes in land-attached investment. Registration, acquisition through purchase, and agrarian reform title all are associated with significant increases in the value of plots. Receipt of registered title is found to increase land values by 30 percent and at the same time greatly increase the propensity to invest, bringing such investment closer to the optimum.

In Malawi, Chirwa (2008) studied the impact of the community-based land development reform program on investments, agricultural productivity, and food production. The study showed that participating small holder farmers had improved access to land and financial resources. They were also far more likely to invest in improved maize seeds, and therefore boost productivity. However, the results also showed that the positive impact of land reform was driven more by the financial assistance provided by the program than change in land tenure. Deininger and Xia (2017) assessed the effects of large-scale transfers in the Malawian real estate context. They estimate that there is evidence of significant underinvestment in estate farms due to the uncertainty associated with insecure land rental rights, providing evidence that securing property rights would have tangible and substantial benefits.

Lovo (2016) analysed the impact of land tenure on investment in soil conservation, estimating that the probability of investing in conservation measures was around 6 pp (about 14%) higher for titled plots in Malawi. Clarity on land titling has also been seen to have distributional impacts especially for women. Deininger et al. (2019) estimated that tenure insecurity in Malawi was associated with a productivity loss of 12% in women farmers equivalent to US$ 14 million annually at the national level. Ajefu and Abiona (2020) also analysed the impact of land tenure security on the capacity of agriculture dependent households to cope with adverse impacts of weather shocks in rural Malawi. The results indicate that property rights through land tenure are linked with improved agricultural productivity and consequently increased household food security.

However, Jacoby and Minten (2007) studied a large sample of plots from an intensively titled rice-growing area of Madagascar and compared land-specific investments, land productivity, and land values for titled and untitled plots cultivated by the same household. Having a title had no significant effect on plot-specific investment and correspondingly little effect on land productivity and land values. Lawry et al. (2017) conducted a systematic review of the impact of land property right interventions on agricultural productivity and investments in Latin America, Asia and Africa. The review suggests that lower gains to productivity and investments in Africa (as compared to the other regions) could be attributed to the relatively high levels of de facto tenure security which are characteristic of pre-existing customary tenure arrangements.

A broad assumption for the increase in land value in Malawi due to land titling and registration based on the review presented above and discussions with experts from the Department of Lands, Malawi would be 25%, towards the lower end of the observed range – for urban and peri urban areas, which are situated near social amenities. This was validated by experts from the Department of Lands who indicated that land prices in Lilongwe had increased by 25% after titling was completed. A more moderate increase of 10% is assumed in rural areas where there are substantially fewer social amenities (such as roads and infrastructure) again based on discussions with the Department of Lands, Malawi.

2. Research Context

The Malawi National Planning Commission (NPC), with technical support from the African Institute for Development Policy, and the Copenhagen Consensus Center (CCC) are implementing the Malawi Priorities project across 2020 and 2021. The Project is a research and advocacy exercise to identify the most effective ways to address the nation's challenges using the framework of cost-benefit analysis. The aim is to inform both short and long term development priorities for the country, acknowledging that there are insufficient resources to address all of Malawi's challenges and that maximizing outcomes requires careful, evidence-based consideration of the costs and benefits of all policies.

The starting point of all research questions is the NPC's existing research agenda, structured around the six thematic areas of Sustainable Agriculture, Sustainable Economic Development, Human Capital and Social Development, Sustainable Environment, Demography, Governance, Peace, and Security, and Human Capital and Social Development. The NPC's research agenda was developed by the Commission in September 2019 after extensive consultation with academics, think tanks, the private sector and government.

Consequently, the Commission's research agenda, prima facie, contains questions of national importance. As a first step, Malawi Priorities drew questions from the NPC research agenda that could be answered using a cost-benefit methodology. Then, additional research questions were added based on input from NPC, an Academic Advisory Group (AAG) of leading scholars within Malawi, and existing literature, particularly previous cost-benefit analyses conducted by the Copenhagen Consensus Center. This process of identifying research questions for investigation generated a total of 38 potential research questions across all 6 thematic areas. The research agenda was validated and prioritized by a Reference Group of 25 prominent, senior stakeholders from government, civil society and the private sector. The outcomes of the Reference Group exercise were used to inform which research questions to prioritize and which interventions to focus on within those 38 potential research questions. The validation process finished in July 2020.

One of the research questions that generated a high score in the priority setting exercise was:

How can national resources best contribute to wealth creation?

This analysis arose from the research agenda validation process and subsequent scoping around this question.

2.1 Research Scoping and Intervention Selection

In late 2020, one research team from Limestone Analytics began scoping the above research question. The scoping process canvassed a number of options before settling on some interventions with high potential. This included land reform, noting that land was one of the key national resources of the country. A full description of that scoping exercise can be found in a separate paper in the Malawi Priorities series (National Resource Management paper).

In early 2021, a decision was made to separate the land titling analysis due to the very different focus areas of the three priority areas (the other two interventions focus on fisheries and mining). Previous research conducted by Copenhagen Consensus Center noted that land titling had a very high BCR in Ghana with a central estimate of 91 (Adjasi, Adiaba and Wong, 2019). This analysis broadly follows the methodology from the Ghana experience.

3. Cost-Benefit Analysis

3.1 Estimated Area to be Titled

There is limited data on the estimated area that remains to be titled in Malawi. According to the World Bank Database, there are 9.4 million hectares of land in Malawi, of which 60% is agricultural, 19% is urban or peri-urban with the remainder forest (World Bank, 2021). Discussions with the Department of Lands suggest that 3.2 million hectares of rural land and 1.5 million hectares of urban land requires titling. These estimates should not be interpreted as precise point estimates, but rather indicative values that are sufficient for the purpose of this cost-benefit analysis. Overall, this suggests around 50% of land in Malawi requires titling.

3.2 Costs

There are two primary costs to implement the land reforms: the first is the actual land titling process, the second relates to creating the infrastructure and services to manage land transactions going forward via decentralized offices.

The cost of surveying land per hectare is based on ongoing titling work being carried out during 2019 and 2020 in Malawi across two projects: i) the 'Strengthening Land Governance for smallholders in Malawi' project implemented by the NGO Oxfam with technical assistance from DAI Europe and ii) Agricultural Commercialization Project (AgCom) funded by the World Bank. Across these projects there are three pilot sites in Group Village Areas of Maoni, Phalombe District in Southern Region, Ching'amba in the Kasungu district in the Central Region and, Chimalabanthu, Rumphi District in the Northern Region. In total the pilot sites surveyed 4,674 land parcels (Harris and Chilonga, 2020).

The land titling process encompasses a range of activities with the most significant cost relating to land surveying. Activities include sensitization and public awareness, and demarcation of TLMA boundaries, employment of land clerks for each TLMA, recruitment and training of staff for field and office work, systematic adjudication and demarcation of land parcels, forming a District and Customary Land tribunal to resolve disputes, public display of land parcels, office data processing to produce a GIS, and actual registration of land rights in District Land Registries. The entire process contains 25 key steps as documented in Harris and Chilonga (2020).

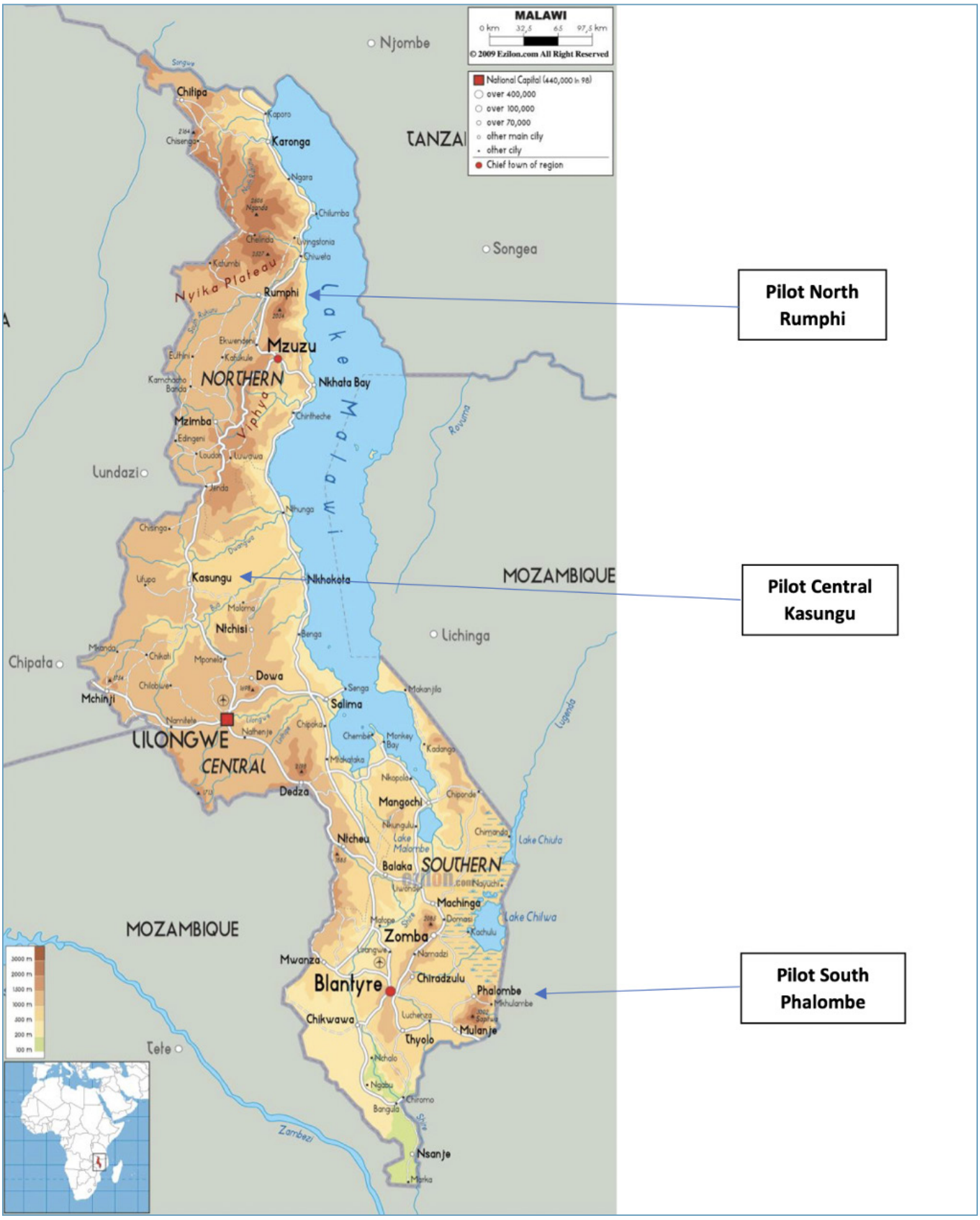
The cost of the entire process averages around $10-$15 per parcel. Given that a parcel is typically around 0.5 ha, the cost works out to $20-$30 per ha. This cost is likely an overestimate of the cost at scale, given the relatively small size of the pilots and the fact that during the pilots, staff were drawn from distant Regional offices. A national rollout would achieve greater scale and utilize local Land Clerks and Customary Land Committees under supervision of District offices, which would reduce human resource cost. Also of importance is that the trials have utilized high-resolution satellite images as base map for surveying boundaries. The image was procured by the Malawi National Statistics Office and shared with Surveyor General and are relatively new. This approach is much less expensive than traditional boundary surveying activities. Large scale rollouts in Ethiopia and Rwanda using this approach have achieved titling costs at less than $10 per parcel (Harris and Chilonga, 2020). A similar map-based approach adopted in Tanzania that also involved mobile technology achieved a 61% reduction between pilot and at-scale rollout, with costs at $20.57 per parcel to $7.85 per parcel respectively. Both figures were substantially less than $40 per parcel costs using traditional approaches (Reydon et al. 2020).

For this analysis we adopt the low end of the pilot range for rural areas – i.e. $20 or MWK 14,900 per hectare. As this report was about to be finalized, we were provided estimates from 2021 piloting activities under the AgCom and Shire Valley Transformation Project that suggested costs per hectare of $5.50 for surveying, adjudication and demarcation. These were based on activities covering 35,760 parcels, more than 7 times the parcels covered under the report by Harris and Chilonga (2020). This substantially lower cost is attributable to greater economies of scale, improved efficiency by the implementing team as they expanded operations, and the use of tablets to view satellite images rather than on printed paper. For conservatism, we retain the $20 per hectare figure, and test the $5.50 value in a sensitivity analysis. As we demonstrate later, even under the higher cost the BCR is very large.

Titling in urban and peri-urban areas is likely to be much less costly due to higher density. Here we assume a cost of $15 or MWK 11,175 per hectare. This is also likely to be on the higher end of the potential cost range.

Recurring and ongoing costs include the cost of capacitating and maintaining district land registry offices. Currently Malawi has only 3 Regional land registry offices in Mzuzu, Lilongwe and Blantyre which will be disbanded once District Offices are in place. Thirty five district offices would require salaries for almost 500 staff members, rental costs for around 1000 sq metres of office space plus up front expenditure for computers, office equipment and furniture estimated at MWK 1,000 million (DAI, 2021, see appendix). Human resource costs were estimated using the official civil service pay grade (Department of Human Resource Development and Management, 2020), while renting office space was assumed to cost MWK 70,000 per person per year as documented in the National Resource Management paper. Overall, the human resource cost represents the largest cost, starting at MWK 1,089 million rising to MWK 2,160 million by 2040 reflecting expected income growth. Equipment costs of around MWK 1,000 million are

Figure 2: Location of Land Titling Pilots, Source: Adapted from Harris and Chilonga (2020)



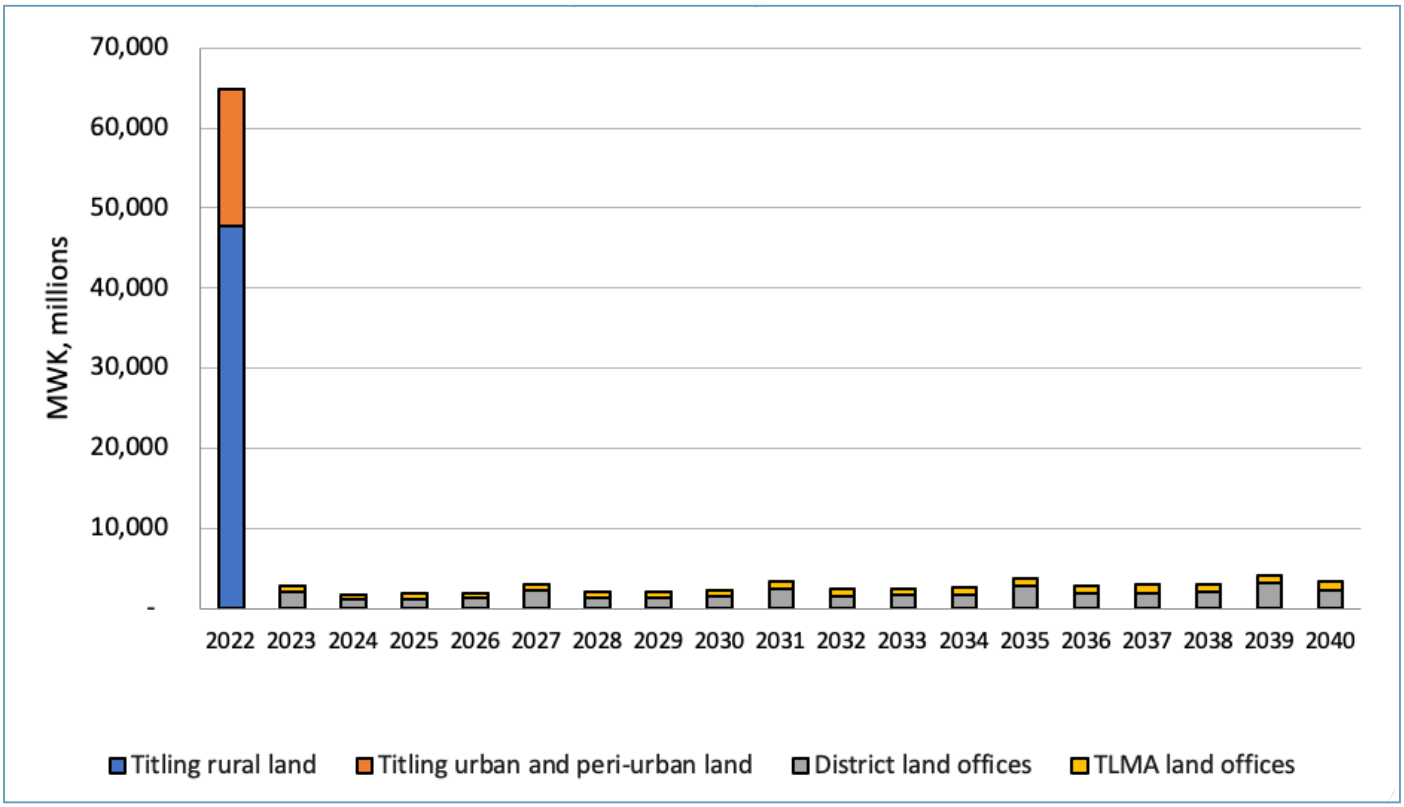
required in the first year and every fourth year thereafter. Office rental, including utilities, is relatively modest at MWK 35 million.

According to law, smaller offices are required at each TLMA to hold land records, of which there are roughly 226 across the country. We estimate the overall cost of these smaller offices at starting at MWK 582 million in 2022 based on rental costs, human resources and equipment required, rising to MWK 1,098 million by 2040 to account for expected real growth in wages. This is an imprecise estimate and is tested in sensitivity analyses. The costs of educating a cadre of land management and surveying personnel does not need to be factored into the analysis since there is already a surfeit of personnel trained in these disciplines from various universities in Malawi, who are waiting for employment. However, they would still need to be trained in the practical aspects of the work, a cost which

is included in the above figures.

A timeline of expected costs is presented in Figure 3. For parsimony, the analysis assumes that all surveying costs are incurred in the first year, with ongoing costs occurring from the second year onwards. Altering this assumption to include, for example, a staggered rollout, would not change the BCR meaningfully since it would merely delay the main cost and benefit realization by the same time period. As can be seen, the largest cost is associated with land titling, which reaches MWK 64,920 million with roughly 73% of the cost for titling rural land. Thereafter, the operating costs of running the district and TLMA offices is relatively modest, averaging MWK 2,699 million per year. Over a period to 2040, the present value of all costs is MWK 88,352 million using an 8% discount rate.

Figure 3: Cost of Implementing Land Reform, Source: Authors' estimates



3.2 Benefits

As discussed above, there are many benefits associated with land titling including increasing access to credit, investment certainty and smoothing land transactions. These benefits are assumed to be embedded in the value of land and the literature review above suggests 10-25% increase as a plausible estimate. Note that this does not necessarily mean that this will translate into realized land prices, since Malawian law places restrictions on the sale of customary land. Instead, it is meant as a proxy to capture the value of the private economic benefits based on international evidence of land value increases after land titling.

Land values were provided by the Lands Department for each of Malawi's three regions, split into various land types (though not consistently provided for each region). These were based on standard land valuation surveys. There is substantial heterogeneity in the data across regions and this is partially due to differences in the types of data provided.

Table 1: Estimated land values per ha hectare by region

	North	Central	South
Value of rural land (low)	*300,000*	*1,500,000*	*500,000*
Value of rural land (median)	*675,000*	*2,000,000*	*3,500,000*
Value of rural land (high)	*900,000*	*3,500,000*	*8,000,000*
Value of peri-urban / urban land (low)	*3,500,000*	*2,500,000*	*15,000,000*
Value of peri-urban / urban land (median)	*15,000,000*	*6,000,000*	*30,000,000*
Value of peri-urban / urban land (high)	*30,000,000*	*30,000,000*	*30,000,000*

Notes: All values in MWK per hectare. Note there was no data provided for urban areas in the Central region, just peri-urban values. The reported high value is assumed to be the same as the high value in the North and South region. **Source:** *Department of Lands*

For the base case, we assume a value of rural land at MWK 2,000,000 per hectare, and the value of urban/peri-urban land at MWK 15,000,000 per hectare. Applying a 25% increase in valuation for urban lands and a 10% increase for rural lands, the total benefits are a staggering MWK 6,425,313 million.

3.3 Results and Sensitivity Analysis

The above exposition shows that the estimated costs are MWK 88,352 million while the benefits are MWK 6,425,313 million. The benefits are therefore 73 times the cost for a central BCR of 73.

Many of the parameters utilized in this report have wide ranges. To test the sensitivity of results we perform a one-way sensitivity analysis on several variables.

Table 2: Parameters Tested in Sensitivity Analysis

Parameter	Conservative	Base	Optimistic
Impact of land titling on urban land values	12.5%	25%	50%
Impact of land titling on rural land values	5%	10%	20%
Value of rural land (MWK per ha)	300,000	2,000,000	8,000,000
Value of peri-urban / urban land (MWK per ha)	900,000	15,000,000	30,000,000
Cost of titling rural land per ha (USD / MWK)	$30 / MWK 22,350	$20 / MWK 14,900	$5.5/ MWK 4,100
Cost of titling peri-urban / urban land per ha (USD / MWK)	$25 / MWK 18,625	$15 / MWK 11,175	$5.5 / MWK 4,100
Cost of district and TLMA land offices (as percentage of base case estimate)	150%	100%	75%
Discount rate	14%	8%	5%

Notes: Conservative assumptions decrease BCR, Optimistic assumptions increase BCR

The results of the sensitivity analysis show that results are most sensitive to the impact of land titling on land values, and value of land in both urban and rural areas. The cost of titling has a moderate impact on BCRs, while the cost of offices and discount rate has the smallest impact of results. Overall, the range of BCRs is 18 to 138.

Table 3: Sensitivity Analysis Results (BCRs)

Parameter	Conservative BCR	Base BCR	Optimistic BCR
Impact of land titling on urban land values	40	73	138
Impact of land titling on rural land values	69	73	80
Value of rural land (MWK per ha)	67	73	94
Value of peri-urban / urban land (MWK per ha)	18	73	138
Cost of titling rural land per ha (USD / MWK)	57	73	119
Cost of titling peri-urban / urban land per ha (USD / MWK)	64	73	83
Cost of district and TLMA land offices (as percentage of base case estimate)	64	73	78
Discount rate	68	73	80

4. Conclusion & Limitations

This note documents a cost-benefit analysis of scaling up land reform efforts across Malawi. The results indicate that the expected BCR is very high, at 73 kwacha for every kwacha spent. This figure is based on several assumptions – costs drawn from pilot land-titling programs in Malawi, benefits drawn from land value reports also from Malawi. The most uncertain parameter of the analysis is the expected benefit of land titling, which is proxied as a 25% and 10% increase in urban and rural land values respectively following mostly international experience. Nevertheless, sensitivity analyses show that the range of BCR values rests in the upper end of the estimated BCRs from Malawi Priorities and other Copenhagen Consensus country projects. The report provides strong impetus to ensure there are no further delays to the implementation of the land reform agenda in Malawi. For a country with an aspiration of wealth creation, land titling is one effective way to generate substantial economic benefits for the vast majority of Malawians.

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6. Appendix

Table A.1: Traditional Land Management Areas and Number of Land Clerks

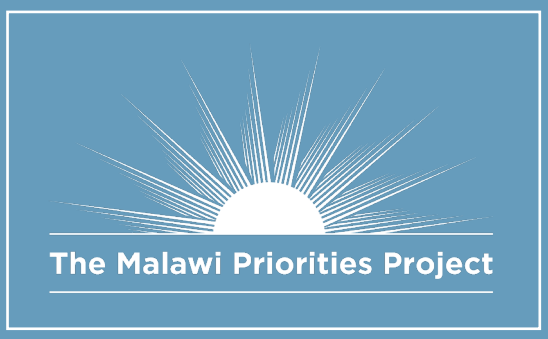
No.	District	No. of TLMAs/Land Clerks (K)	No.	District	No. of TLMAs/Land Clerks (K)
1	Chitipa	5	15	Ntcheu	10
2	Karonga	6	16	Balaka	5
3	Rumphi	7	17	Mangochi	10
4	Mzimba	13	18	Machinga	14
5	Nkhata Bay	10	19	Zomba	7
6	Likoma	1	20	Chiradzulu	6
7	Kasungu	16	21	Phalombe	6
8	Dowa	6	22	Mulanje	6
9	Ntchisi	7	23	Thyolo	11
10	Lilongwe	13	24	Blantyre	8
11	Mchinji	10	25	Mwanza	2
12	Salima	10	26	Neno	4
13	Nkhotakota	7	27	Chikwawa	9
14	Dedza	8	28	Nsanje	9

Source: *Plan for the Establishment of District Land Registries in Malawi, DAI Europe, April 2021 (Draft Report).*

Table A.2: Estimated Staff Requirements based on Workload Estimates

No	Job Title	No. of Staff per Job Title per Registry			Total No. of Staff per class per Job Title			Total Staff
		Busy Registries	Medium Registries	Quiet Registries	Busy Registries	Medium Registries	Quiet Registries	
		31	**15**	**8**	**4**	**15**	**16**	**491**
1	District Land Registrar	1	1	1	4	15	16	35
2	Assistant land Registrar	2	1	0	8	15	0	23
3	Senior Assistant Records Officer	4	2	0	16	30	0	46
4	Assistant Records Officer	4	1	1	16	15	16	47
5	Senior Land Registration Assistant	4	2	1	16	30	16	62
6	Lands Registration Assistant	4	2	1	16	30	16	62
7	Cartographer	2	2	1	8	30	16	54
8	Demarcation Assistant	2	2	1	8	30	16	54
9	Deeds Binder	2	1	1	8	15	16	54
10	Messenger	2	1	1	8	15	16	54

Source: *Plan for the Establishment of District Land Registries in Malawi, DAI Europe, April 2021 (Draft Report).*



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